



College of Engineering

A NEW INDUSTRY FOR SOUTHERN AZ



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Chemical and Environmental Engineering



Why a Desert Crop – Guayule (why-you-lee)



- Single species – *Hevea brasiliensis*
- Primarily grown in Southeast Asia
- Supply chain issues
- Cost variability
- Increasing labor costs
- More sustainable than synthetic rubber
- Higher tensile strength & natural elasticity



Industrial Products



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Guayule



Rubber
(1.8 billion lbs annually)



Latex



Resin
Adhesives, terpenes,
insect repellents



Bagasse

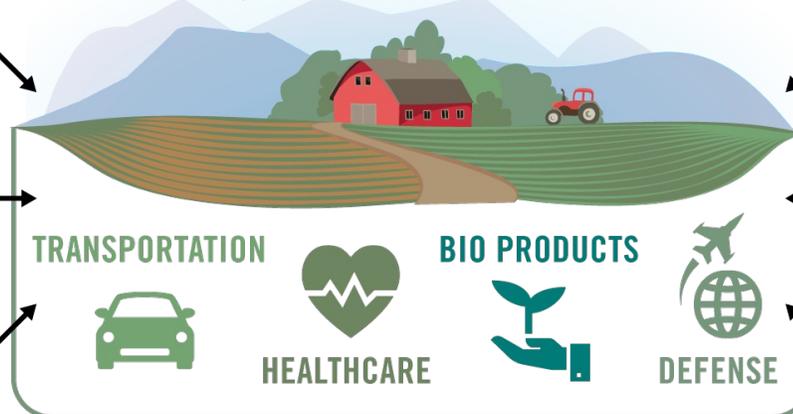
Pioneer climate-smart US natural rubber bioeconomy

Guayule-based rubber benefits:

Develop & optimize agricultural practices that support carbon sequestration in the desert SW

Create revenue for underserved growers & tribal partners

Grow a domestic supply of carbon negative natural rubber



Quantify economic and environmental impacts of the guayule value chain

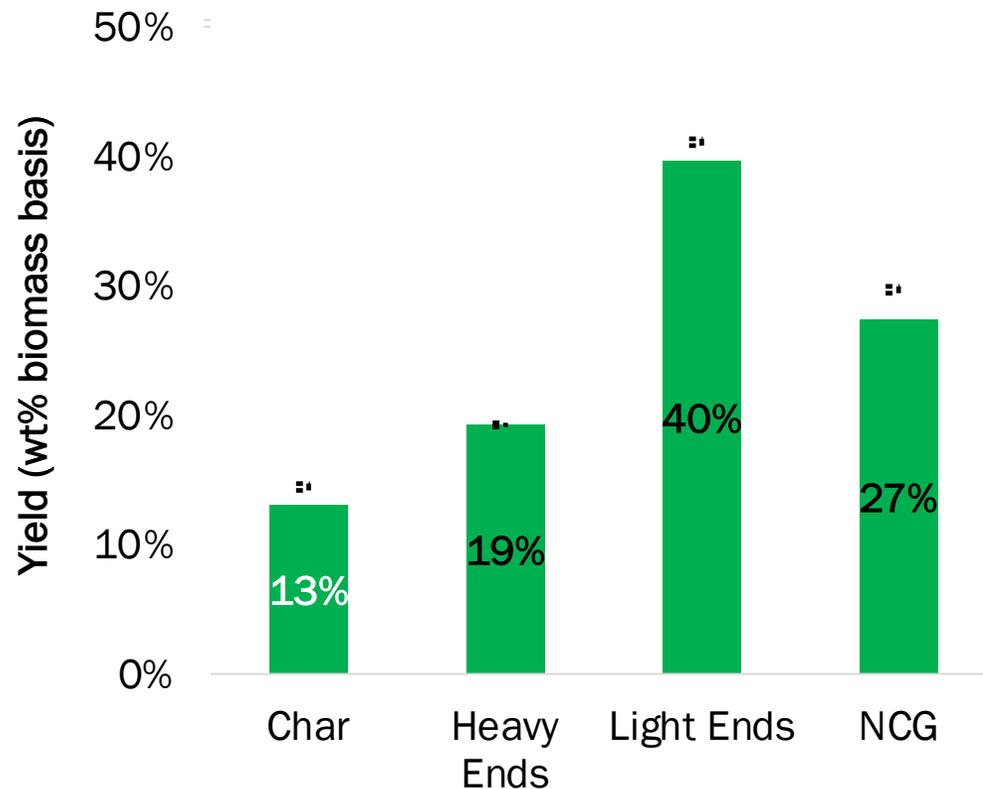
Strengthen SW bioeconomy to support opening of Bridgestone Americas natural rubber facility in 2026

Participate in USDA Partnerships for Climate Smart Commodities Network

Bagasse to Fuel



Bagasse



Fast Pyrolysis
Ryan Smith, Deputy Director
Bioeconomy Institute
Iowa State University